Title:
Species hybridisation and interactions in schistosomes in Cameroon (SHIS-CAM): an overview and pilot results

Abstract:
While Cameroon has been at the forefront of nationwide schistosomiasis control, recent reports of hybridisation events and possible zoonotic transmission raise concerns that progress towards the WHO NTD Roadmap 2021–2030 goals may be disrupted. The impact of these novel schistosome genotypes on control efforts represents a key knowledge gap in the effective management of emerging hybrid schistosomes.

The Species Hybridisation and Interactions in Schistosomes in Cameroon (SHIS-CAM) project aims to address these challenges through a One Health approach, ensuring that future actions of Cameroon's national control programme are informed by both international and locally led research.

Here, we present an overview of the SHIS-CAM study, which focuses on three objectives:
Obj-1: Determine the magnitude and epidemiology of hybrid schistosomes in humans and livestock, with particular reference to the *Schistosoma haematobium* group and prior epidemiological assessments of urogenital and intestinal schistosomiasis.
Obj-2: Verify, through a five-year longitudinal population study, whether the prevalence of hybrid infections remains stable across age and sex demographics in the context of community-wide praziquantel treatment.
Obj-3: Explore environmental transmission through surveillance frameworks and experimental infections, including GPS-tagged cattle and eDNA surveillance of aquatic habitats using metabarcoding targeting both schistosome and snail signatures.

Finally, we present initial findings from a pilot study conducted in February 2026, demonstrating current methodologies and providing new data on the scope and distribution of hybrid schistosomes in Cameroon.